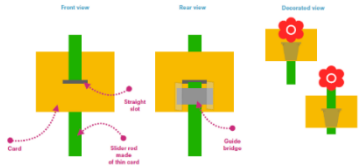
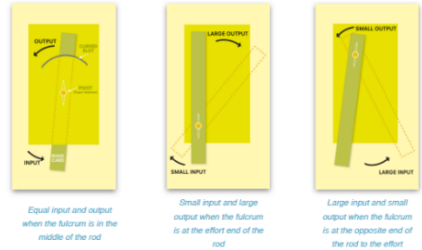
Rednal Hill Infant School Design and Technology Progression

	Nursery	Reception	Year 1	Year 2
Autumn 1	**Practical Knowledge – Fine Motor Skills, Tools and Exploration.** Adults model and scaffold the use of one-handed tools (scissors) and provide opportunities for children to develop fine motor skills with a preference for a dominant hand. Children are given opportunities to explore materials in the creative and construction continuous provision.	**Practical Knowledge – Fine Motor Skills, Tools and Exploration.** Children are given opportunities to develop fine motor skills using different tools. They develop skills such as cutting and strengthening their pincer grip through manipulating materials and other tools. **Disciplinary Knowledge – Structures.** Children are provided with a range of materials to construct with. **Practical Knowledge – Food.** Children learn about food hygiene and healthy and unhealthy foods. They use practical skills to prepare vegetables and make soup for Harvest.		
Autumn 2			**Mechanisms- Christmas Cards.** Children will explore how a simple slider mechanism works using a guide bridge. They will look at existing products to answer these questions: - • How does the picture move? • What keeps it in place? • What would happen if it didn't have a guide bridge? Children gather ideas as a class and decide on the features needed to make a sliding card.  Following the design grid, children will use knowledge and technical skills of: -	**Mechanisms- Christmas Cards.** Children will use an example of a slider they made in Year 1 as well as children's books that use sliders, to unpick how they are made and develop a list of features needed to make a pivot/ lever mechanism. They will discuss how the design changes to make it more exciting to the user and gives more scope for use. Children will eplore how you make the output larger/ smaller based on where the pivot is and have a go at making their own pivot/ leaver before designing their Christmas card. 

			- measuring (slider and slit) - cutting (scissors)	Following the design grid children will design a Christmas card using the technical knowledge developed. Children will create their card using the following technical skills:- -measuring (boarder and rod) -cutting (scissors and paper knife). -hole punching (split pin) Children will evaluate their vehicle against their design brief, what they think went well and suggest changes/ improvements.
Spring 1	**Practical Knowledge – Exploration.** Children explore different materials freely, in order to develop their own ideas about how to use them and what to make. Children are given opportunities to develop their making/ practical skills for a purpose, taking inspiration from their teachers or own experiences.	**Practical Knowledge – Joining, Materials, Food.** Children are taught different techniques for joining materials – flanges/ tabs. They recognise that different materials have different purposes. Children are given opportunities to develop scissor skills using different materials i.e. progressing onto cutting card/ fabrics. They are given further opportunities to prepare food and bake using a range of different ingredients. They discuss balanced diets. (bread, cakes) **Disciplinary Knowledge – Structures and Mechanisms.** Children are able to say what model/ small world they have		**Structures/ Stability- Towers** Children will explore the concept of structure and the importance of stability. They will explore solid structures in nature and how these are used to inspire designs. Children will learn that techniques such as braces and wide bases are used to make objects more stable. They will understand that the centre of gravity is the specific point where its total weight is evenly balanced. Following the design grid children will design a well-structured and stable tower which can stand on its own. Children will evaluate their vehicle against their design

		made using construction kits to reach a design e.g. tower, house, castle. Children are taught how to use split pins to create a moving part for a purpose.		brief, what they think went well and suggest changes/ improvements.
Spring 2			**Wheels and Axels (Joining)** During this unit children will design and make their own vehicle which has a clear purpose, with inspiration taken from 'Car Fest'. They focus on creating a stable chassis and axels. Additionally, they will explore how to create the desired shape of their vehicle. Children will learn: • How axels are joined to a chassis. • How to keep a wheel on. • What makes it more stable and what makes it travel faster? Children will practice and develop the following technical skills: - -Joining- using tape/ glue to best suit the material -Measuring and sawing their axel and attaching wheels to make it stable when pushed. -Joining their axel and wheels onto their chassis Children will evaluate their vehicle against their design brief and suggest changes/ improvements.	

Summer 1	**Disciplinary Knowledge – Design, make and give meaning.** Children develop their own ideas through modelmaking - construction and creative materials. They decide which materials to use to express their ideas. Children begin to join different materials and explore different textures.	**Disciplinary Knowledge – Design, make, evaluate.** Junk modelling -children think and discuss what they want to make, discuss problems and how to solve them and reflect on their creative ideas – evaluating orally. **Practical Knowledge – Food.** Children learn about where different foods come from and which food group they belong to.		**Structures/ Strength- Bridge** Children will explore types of bridges and how they have evolved over time. From a fallen tree etc. They will learn about the purpose of the bridge - to transport over water/ void and natural structures vs man-built structures. They will know that :- -The shape gives it strength. -Triangles are the strongest strength. -Supports such as pillars can add strength. Following a design brief, children will make a bridge to support a weight. They will be given a length that it needs to be. Children will apply the technical aspects of how to make a structure strong and will then use practical skills such as; - Cutting - Folding - Measuring - Joining - Gluing/ taping Children will evaluate their vehicle against their design brief, what they think went well and suggest changes/ improvements.

Summer 2			**Healthy Snack** Following their enquiry around chocolate children will look at what healthy alternatives there are for snacks. They will discuss a 'balanced diet' and sort healthy and unhealthy food options. Children will use this to identify which ingredients are healthy. They will design a healthy frozen yoghurt snack, where they will add healthy aspects- fruit etc. To make the snack children will use the practical skills of keeping themselves and their preparation areas hygienic as well as:- • Spreading • Using a bridge hold • Cutting/ slicing using tools	**Healthy portable snack** Children will explore what is meant by a 'portable snack'. They will research different types of portable snacks and then look at how to make healthy choices based on Year 1 learning. They will re-cap the importance of food hygiene and what this looks like and give reasons for its importance on a larger scale i.e. kitchens/ restaurants. Using the design grid children will design a healthy snack which they will be able to be taken outside for their Forest School survival day. Children will use tools to develop the practical skills of:- • Spreading • Grating • Peeling • Fork secure/ bridge hold • Folding